BOOKS AND PERIODICALS.

A First Course in Infinitesimal Calculus. By Daniel A. Murray, Ph. D., Professor of Mathematics in Dahousie College, Halifax, N. S. 8vo. Cloth, xvii +439 pages. Price, $2.00. New York: Longmans, Green & Co.

We note in this work a few departures from the usual method of presentation of the Calculus. Among these departures are the following: Integration, or anti-differentiation, is presented simultaneously with differentiation; Infinite Series is relegated to the latter part of the book where also Taylor's and MacLaurin's Theorems are presented; and Indeterminate Forms are discussed in an Appendix.

In Chapter X, integration is formally taken up and considered as a process of summation. A chapter is also devoted to Differential Equations. In the Appendix is also briefly treated Hyperbolic Functions, Intrinsic Equations, and Applications to Mechanics.

In his discussion of Hyperbolic Functions, the author, following the suggestion of Professor George M. Minchin, uses *hysin*, *hycos*, *hytan*, *hycot*, *hysec*, and *hycosec*, instead of the usual *sinh*, *cosh*, etc. This notation has the advantage in that the symbols are now pronouncable, but there is a slight disadvantage resulting from the extra added letter. The notation might be abbreviated as follows: *hys*, *hyc*, *hyt*, *hyct*, *hysec*, *hycosec*. The last two not being used as much as the other four might retain the longer form.

The book contains many references for collateral reading, and a large number of problems are inserted. Many of the figures are very poorly drawn, thus marring, somewhat, the attractivensss of the book. B. F. F.

Wireless Telegraphy; Its Origins, Development, Inventions, and Apparatus. By Charles Henry Sewall, Author of "Patented Telephony," "The Future of Long-Distance Communication." 8vo. Cloth, 229 pages. Price, $2.00. New York: D. VanNostrand Co.

This book presents a comprehensive view of wireless telegraphy, giving its history, principles, systems in use, and the possibilities in theory and practice. The book will be found helpful to all those who are interested in this subject. The diagrams are good and the presentation is of a popular nature. B. F. F.

Einführung in die Theorie der Analytischen Funktionen einer Komplexen Veränderlichen, zweite Auflage. Von H. Burkhardt. xii+227 pages. Leipzig, Veit & Comp. 1903.

The changes that have been made in bringing out this new edition will make the text much more useful to the student, since the discouraging list of unproved theorems in Chapter III of the old edition has been replaced by ample proofs of the theorems now needed in the new proof of Cauchy's theorem, while the theorems on double integrals have been dispensed with. D.

Algebraische Analysis. Von H. Burkhardt. xii+195 pages. Leipzig, Veit & Comp. 1903.

This book, the preceding, and the 1899 volume on Elliptic Functions, together form the complete *Vorlesungen* on function-theory. The present introductory volume gives an admirable elementory account of the general theory of irrational numbers (on the basis of Dedekind's cut) and limit processes, with application to the analytic representation of the trigonometric, exponential and logarithmic functions. It is intended for mature students who have experienced in the Calculus a need of a purely arithmetical foundation, and who are ready for rigorous methods in analysis. To readers of this class, who wish a brief account of the best methods in algebra, the book will prove very welcome. D.